DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaffal (5,518,256) in view of Burgmann (3,973,779).

Gaffal discloses a sealing device having a gap between a rotor 3 on a shaft and a stator on a housing. A rotatable (e.g. see abstract) floating ring 4 is mounted in the gap with a clearance between the surfaces of the ring, stator and rotor. As seen in Figure 6, for example, the ring has a width (e.g. length) at least 3 times the thickness (in the radial direction), which is perpendicular to the width. The ring can have a concavoconvex pattern 24 on its surface. The ring has different diameters and one of the notches in the figures can be considered a notch required by claim 4. Gaffal does not appear to disclose a seal on the rotor as required. Burgmann teaches a sealing arrangement having a floating ring in a gap between a rotor and stator. Burgmann teaches the use of a lip seal on a rotor component (e.g. Figs. 4 or 5). The lip seals the assembly when the shaft is at rest. The lip is in contact with a face (at 11d) of the stator. The lip lifts from the face when the shaft rotates (col. 7, lines 30-40). Burgmann also teaches that it is known to make floating seals from a resin such as PTFE (col. 2, lines 28-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the assembly of

Gaffal with the lip seal taught by Burgmann to provide additional sealing when the shaft is at rest. And, the substitution of a known, equivalent element (material) yields expected results.

Response to Arguments

3. Applicant's arguments filed 11-25-08 have been fully considered but they are not persuasive.

Gaffal discloses a floating ring that is free to rotate. Applicant has argued that Burgmann does not disclose that the lip lifts out of contact with the face during rotation. The examiner disagrees. Attention is directed to column 2, lines 18-23 and 42-46, which further explain the lip separates during rotation.

Kuroiwa and Johnson also show floating rings with dimensional ratios similar to Applicant's.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062. The examiner can normally be reached on M-F (9-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alison K. Pickard/
Primary Examiner, Art Unit 3676

AP